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Water-Data Report 2008

08074000 Buffalo Bayou at Houston, TX

San Jacinto Basin
Buffalo-San Jacinto Subbasin

LOCATION.--Lat 29°45′36″, long 95°24′30″ referenced to North American Datum of 1927, Harris County, TX, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Shepherd Drive in Houston and 0.8 mi upstream from Waugh Drive.

DRAINAGE AREA.--336 mi², unadjusted for basin boundary changes.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1936 to Sept. 1957 (daily mean discharge), Oct. 1957 to Dec. 1961 (high-water records and discharge measurements), Jan. 1962 to Sept. 1975 (daily mean discharge), Oct. 1975 to current year.

PERIOD OF RECORD, Water-Quality.--
Chemical data: Oct. 1968 to July 1981, Apr. 1986 to Sept. 2000.
Biochemical data: Oct. 1968 to July 1981.
Pesticide data: Feb. 1969 to July 1981.
Specific conductance: Apr. 1996 to Sept. 2000.
pH: June 1998 to Sept. 2000.
Water temperature: Apr. 1986 to Sept. 2000.
Dissolved oxygen: Apr. 1986 to Sept. 2000.

REVISED RECORDS.--WSP 1732: Drainage area (former site).

GAGE.--Water-stage recorder. Datum of gage is 1.36 ft below NGVD of 1929, 1973 adjustment; records unadjusted for land-surface subsidence. Prior to June 19, 1936, nonrecording gage, and June 19, 1936, to Jan. 16, 1962, water-stage recorder at site 0.8 mi downstream at datum 4.08 ft lower. Jan. 17, 1962, to Sept. 30, 1973, auxiliary water-stage recorder 0.8 mi downstream. Water-stage recorder at Whiteoak Bayou at Main Street (station 08074598) used as auxiliary gage after Sept. 30, 1993. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1944, flood flows are regulated (72 percent) by Barker and Addicks Reservoirs (stations 08072500 and 08073000), 26.3 and 26.8 mi upstream, flood peaks from the urbanized areas below these reservoirs are often independent of the regulation. Daily mean discharge is computed using a stage-fall-discharge relation for all storms that produce peak discharges above 2,000 ft³/s. Daily mean discharge below 1,000 ft³/s is computed or estimated following designated storm periods only. Low flow is mostly sustained by wastewater effluent from Houston suburbs. Gage heights are affected by tides, backwater from Whiteoak Bayou, and other streams. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--8 years (water years 1936-44), 272 ft³/s (197,100 acre-ft/yr).

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--26 years (water years 1945-57, 1962-75), 274 ft³/s (198,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, June 9, 2001, gage height, 36.58 ft; maximum gage height, 40.00 ft, June 9, 2001; minimum daily, 1.3 ft³/s, May 24, 1939, Nov. 5, 1950, occurred prior to urban development and accompanying wastewater effluent releases.

EXTREMES OUTSIDE PERIOD OF RECORD.--All flood data at site 0.8 mi downstream at present datum. Maximum gage height since at least 1835, 49.0 ft Dec. 9, 1935 (discharge, 40,000 ft³/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (discharge, 19,000 ft³/s), at bridge on Capitol Avenue, affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft³/s, Sept. 13, 2008 at 1415 hours (gage height, 31.97 ft); maximum gage height, 32.41 ft, Sept. 13, 2008 at 1200 hours (discharge, 8,040 ft³/s); minimum discharges not determined (affected by tides).

08074000 Buffalo Bayou at Houston, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	2,090	---	---	---	---	---	---	---	---	---
2	---	---	2,030	---	---	---	---	---	---	---	---	---
3	---	---	1,680	---	---	---	---	---	---	---	---	---
4	---	---	2,010	---	---	---	---	---	---	---	---	---
5	---	---	1,960	---	---	---	---	---	---	---	1,350	---
6	---	---	1,690	---	---	---	---	---	---	---	690	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	1,780	---	---	---	---	---	---
11	---	---	---	---	---	763	---	---	---	---	---	---
12	---	---	---	---	---	1,740	---	---	---	---	---	---
13	---	---	---	---	---	678	---	---	---	---	---	5,610
14	---	---	---	---	---	---	---	---	---	---	---	7,240
15	---	---	1,500	---	---	---	---	---	---	---	---	3,780
16	1,810	---	1,080	1,630	---	---	---	---	---	---	---	1,770
17	1,660	---	---	966	---	---	---	---	---	---	---	2,140
18	1,720	3,100	---	1,210	---	---	---	---	---	---	---	2,080
19	1,830	998	---	2,980	---	---	---	---	---	---	881	1,100
20	1,940	1,790	---	1,660	---	---	---	---	---	---	1,260	---
21	864	1,710	---	2,010	---	---	---	---	---	---	1,390	---
22	---	758	---	907	---	---	---	---	---	---	---	---
23	---	1,520	---	1,630	---	---	---	---	---	599	---	---
24	---	3,110	---	1,120	---	---	---	---	---	1,480	1,630	---
25	---	1,980	---	---	---	---	---	---	---	2,210	1,530	---
26	---	---	---	---	---	---	---	---	---	1,180	---	---
27	---	2,000	---	1,580	---	---	---	---	---	---	---	---
28	---	2,030	---	1,960	---	---	---	---	---	---	---	---
29	---	1,970	---	1,020	---	---	---	---	---	---	---	---
30	---	2,080	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---